LISTING OF THE CLAIMS

IN THE CLAIMS:

The claims as pending are as follows:

1-28. (Canceled)

29. (Previously presented) A device for detecting, measuring or monitoring the activities or concentrations of at least one protein having similar or overlapping properties towards multiple substrates, said device comprises

a cartridge comprising a plurality of substrates having n+1 number of substrates to be contacted with a plurality of aliquots of a test sample having n number of proteins having similar or overlapping properties towards the plurality of substrates, wherein n is a positive integer and n +1 is at least 2;

a detector for detecting reaction rates between the protein and each substrate;

software for calculating the activity or the concentration of the protein using a set of equations which factor in a sensitivity coefficient for each substrate and for each protein and the reaction rates, wherein the sensitivity coefficient was determined from a sensitivity coefficient sample by

obtaining a plurality of inhibited dilutions of the sensitivity coefficient sample, wherein the plurality of inhibited dilutions comprise a plurality of concentrations of the protein which are partially to completely inhibited;

exposing each inhibited dilution of the plurality of inhibited dilutions to each substrate;

measuring the reaction rates between each uninhibited protein in each inhibited dilution and each substrate;

calculating the linear relationships between the reaction rates of each uninhibited protein and each concentration of the sensitivity coefficient sample at infinite inhibitor concentration; and

extracting each sensitivity coefficient of each substrate for each protein from the calculated linear relationships.

30. (Previously presented) The device of claim 29, wherein the cartridge further comprises a reagent, a buffer, a standard, or a combination thereof for measuring the reaction rates.

31. (Withdrawn) A kit for detecting, measuring or monitoring the activities or concentrations of at least one protein in a test sample comprising the device of claim 29.

32. (Withdrawn, Previously presented) The kit of claim 31, wherein the device measures the reaction rates between acetylcholinesterase and butyrylcholinesterase and the substrates, and calculates the activities or concentrations acetylcholinesterase and butyrylcholinesterase.

33. (Withdrawn) The kit of claim 32, wherein the substrates for acetylcholinesterase and butyrylcholinesterase include acetylthiocholine, butyrylthiocholine, and propionylthiocholine.

34. (Withdrawn) The kit of claim 31, further comprising a chromogenic substrate.

35. (Previously presented) The device of claim 29 in the form of a biosensor capable of detecting an agent which affects the concentration or activity of at least one protein in a test sample, wherein the protein belongs to a plurality of proteins and the plurality of proteins have similar or overlapping properties towards a plurality of substrates, which comprises a sealed chamber containing a known mixture of the plurality of proteins.

36. (Withdrawn) A database of sensitivity coefficients for calculating the activities or the concentrations of

at least one protein in a test sample, wherein the protein belongs to a plurality of proteins and the plurality of proteins have similar or overlapping properties towards a plurality of substrates, made by using the device of claim 29.

37-38. (Canceled)

39. (Previously presented) The device of claim 29, wherein the device is a handheld device.

40. (Previously presented) The device of claim 29, wherein the cartridge triggers device automation when inserted.

41. (Previously presented) The device of claim 29, wherein the plurality of substrates include acetylthiocholine, butyrylthiocholine, and propionylthiocholine.

42. (Previously presented) A device for detecting, measuring or monitoring the activities or concentrations of at least one protein in a test sample, wherein the protein belongs to a plurality of proteins which have similar or overlapping properties towards multiple substrates, said device comprises

a cartridge comprising a plurality of substrates, which are to be contacted with a plurality of aliquots of the test sample, wherein the number of substrates in the plurality of substrates is at least two;

a detector for detecting reaction rates between the protein and each substrate;

software for calculating the activity or the concentration of the protein using a set of equations which factor in a sensitivity coefficient for each substrate and for each protein and the reaction rates, wherein the sensitivity coefficient was determined from a sensitivity coefficient sample by

obtaining a plurality of inhibited dilutions of the sensitivity coefficient sample, wherein the plurality of inhibited dilutions comprise a plurality of concentrations of the protein which are partially to completely inhibited;

exposing each inhibited dilution of the plurality of inhibited dilutions to each substrate;

measuring the reaction rates between each uninhibited protein in each inhibited dilution and each substrate;

calculating the linear relationships between the reaction rates of each uninhibited protein and each concentration of the sensitivity coefficient sample at infinite inhibitor concentration; and

extracting each sensitivity coefficient of each substrate for each protein from the

calculated linear relationships.

43. (Previously presented) A device for detecting, measuring or monitoring the activities or concentrations of at least one protein in a test sample, wherein the protein belongs to a plurality of proteins which have similar or overlapping properties towards multiple substrates, said device comprises

at least two substrates to which the at least one protein has similar or overlapping properties and which are to be contacted with a plurality of aliquots of the test sample;

a detector for detecting reaction rates between the protein and each substrate;

software for calculating the activity or the concentration of the protein using a set of equations which factor in a sensitivity coefficient for each substrate and for each protein and the reaction rates, wherein the sensitivity coefficient was determined from a sensitivity coefficient sample by

obtaining a plurality of inhibited dilutions of the sensitivity coefficient sample, wherein the plurality of inhibited dilutions comprise a plurality of concentrations of the protein which are partially to completely inhibited;

exposing each inhibited dilution of the plurality of inhibited dilutions to each substrate;

measuring the reaction rates between each uninhibited protein in each inhibited dilution and each substrate;

calculating the linear relationships between the reaction rates of each uninhibited protein and each concentration of the sensitivity coefficient sample at infinite inhibitor concentration; and

extracting each sensitivity coefficient of each substrate for each protein from the calculated linear relationships.